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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Paper No. 9

Application Number: 09/619,219
Filing Date: July 19, 2000
Appellant(s): BARD, STEVEN R.

Timothy N. Trop
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 13 January 2003.

(1) Real Party in Interest

A statement identifying the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The brief does not contain a statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief. Therefore, it is presumed that there are none. The Board, however, may exercise its discretion to require an explicit statement as to the existence of any related appeals and interferences.

(3) Status of Claims

The statement of the status of the claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Invention

The summary of invention contained in the brief is correct.

(6) Issues

The appellant's statement of the issues in the brief is correct.

(7) Grouping of Claims

The appellant's statement in the brief that certain claims do not stand or fall together is not agreed with because claim 29 is included with both groups and claim 30 is not included in either group. It is presumed that claims 2, 6-12, and 15-29 may be grouped with claim 1 and claims 13 and 30 may be grouped with claim 3

(8) Claims Appealed

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) Prior Art of Record

5,842,027	OPRESCU ET AL	11-1998
6,425,019	TATEYAMA ET AL	7-2002

Anderson, D. "FireWire System Architecture, Second Edition: IEEE 1394a" 1999, pp. 1-64, 427-429

(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-3, 6-13 and 15-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oprescu et al.

With regard to detecting a power sink coupled to a power source, as shown in claims 1 and 11, Oprescu et al teach determining what components are connected to a bus with a power manager at initialization (col. 5, lines 25-42; col. 7, lines 17-54; Figure 1, power manager 50, power line 30, bus 12). With regard to receiving and using power class information to determine whether to supply power to the sink, as shown in claims 1, 11 and 15, Oprescu et al. teach sending the power requirements of all components attached to the bus to the power manager and determining whether there is enough power to power additional devices (col. 6, lines 27-41; col. 7, line 11 - col. 8, line 65).

Oprescu et al. do not teach requesting a power class indication from the sinks, as shown in claims 1 and 11. The Examiner takes official notice that it is well known to request data from other components on a bus. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the power manager, as taught by Oprescu et al., to include requesting power class information, because

then the power manager would control the time when data is received and avoid receiving information from two components simultaneously.

With regard to coupling a plurality of power sinks to the power source, as shown in claims 2 and 12, Oprescu et al. teach coupling more than one power sink to the bus (col. 5, lines 1-15). With regard to receiving a self-identifier packet at the source from the sink, as shown in claims 3 and 13, Oprescu et al. teaches sending identifying information from all components connected to the bus to the power manager at initialization and sending identifying information and state information when power is requested (col. 7, lines 18-33; Figure 2, step 100).

With regard to determining the available power of the source, as shown in claims 6 and 16, Oprescu et al. teach finding the sum of power being used and determining the surplus power (col. 8, lines 1-19; Figure 2, step 104). With regard to determining whether to supply power, as shown in claims 7 and 17, Oprescu et al. teach comparing the surplus power with the power requirements of an additional component to determine whether to supply power to the component (col. 8, lines 20-65). With regard to supplying power for enumeration to the sink whether the source is able supply power to the sink or not, as shown in claims 8, 9, 18 and 19, Oprescu teaches initializing all components in a local database at startup (col. 7, lines 34-54). With regard to sending an identifier to the source to determine whether the source can supply power to the sink, as shown in claims 10 and 20, Oprescu teaches sending identifying information and using this to look up power requirements of components on the bus (col. 7, lines 18-33, 55-67).

With regard to a connection to a power source, a plurality of ports to couple power consuming devices, and a processor-based device to determine whether to supply power to the devices based on power class information, as shown in claims 21 and 24, Oprescu et al. teach a power line and a power manager both connected to a bus that is connected to power consuming devices (; col. 7, lines 11-17; col. 8, lines 25-42; Figure 1, power manager 50; bus 12, power line 30; col. 5, lines 1-52). With regard to a fan out physical layer, as shown in claim 22, Oprescu et al. teach a fan out physical layer; col. 9, lines 34-55; Figure 3). With regard to an AC adapter, as shown in claim 23, Oprescu et al. teach an AC adapter (col. 4, lines 57-67; Figure 1, AC adapter 34). With regard to providing power for enumeration and then determining whether to provide further power, as shown in claim 25, Oprescu et al. teach identifying all components and adding them to a local database before determining whether to provide power in response to power requests (col. 6, line 27 - col. 7, line 67).

With regard to power consuming circuitry, a processor-based device, and a port connected to receive power from and provide power class information to the power source, as shown in claim 26, Oprescu teaches power consuming devices connected to a bus and a power manager and determining whether to supply power based on provided power information (col. 7, lines 11-17; col. 8, lines 25-42; Figure 1, power manager 50, power line 30; bus 12; col. 5, lines 1-15; col. 5, line 53 - col. 6, line 4). With regard to the system being a mobile computer, as shown in claim 27, Oprescu et al. teach that the system could be a portable computer or a laptop (col. 1, lines 34-49). With regard to a physical layer integrated with a link layer, as shown in claim 28, and a

data plug, as shown in claim 29, Oprescu et al. teach a physical layer with a linked layer (col. 9, lines 34-55). With regard to the processor based device generating a self-ID packet that indicates the power needs of the system, as shown in claim 30, Oprescu et al. teach that the power manager receives the power needs of all components attached to the bus at initialization (col. 7, lines 34-67).

(11) Response to Argument

Applicant states that no reference of record in any way suggests providing power class information in particular. Oprescu et al. teach sending power required for devices over a bus to a power manager automatically upon system initialization (col. 6, lines 27-41; col. 7, lines 11-33). "Power requirements" information corresponds to the "power class" information in the claims, and the information is provided to a power manager. Oprescu et al. do not specifically teach requesting the power requirements information. The power manager may simply wait to receive the power requirements information. Oprescu et al. teach conventional transmission and reception over a bus (col. 7, lines 17-33).

While not specifically taught in Oprescu et al., waiting for a request before transmission is a conventional and well known method for transmitting data over a bus. The protocol for communication over the bus is a matter of engineering design. Bus load and arbitration are concerns for bus communication. Tateyama et al. (US Patent No. 6,425,019) teach having a host send a request for information and responding to the request in order to have more versatile and efficient communication (Abstract, col. 1, line 40 col. 3, line 10). Anderson (Firewire System Architecture, Second Edition:

IEEE1394) teaches bus communication using a request and response (page 38, par. 1, Figure 3-1). Anderson also teaches automatic configuration for devices connected to the bus including sending power requirements, which would require a request for the power requirement data (page 44, par. 1, page 55, par. 1; page 428, par. 2; page 37, par. 4). The stated rationale for combining in the Office Action, mailed 11 October 2002, is that "then the power manager would control the time when data is received and avoid receiving information from two components simultaneously." Therefore, the prior art supports using a request and receiving a response as a conventional protocol in bus communication, and the prior art supports the stated rationale for combining specific conventional bus protocol with the power management system taught by Oprescu et al.

With regard to claim 3, Applicant states that there is nothing in Oprescu to substantiate the argument that Oprescu obtains a self-identifier packet from the sink. Oprescu et al. teaches sending identifying information from all components connected to the bus to the power manager at initialization and sending identifying information and state information when power is requested (col. 7, lines 18-33; Figure 2, step 100). Specifically, Oprescu et al. teach receiving and storing information on all devices connected to the bus and current device status of all devices in a database (col. 7, lines 18-33, Figure 2, power manager database 52). Of course, this information is associated with particular devices and therefore identifies the devices and is identifying information. Therefore, when a particular device requests power, information for that particular device can be recalled.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

mlb
April 15, 2003

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